



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/894,086	11/25/2015	Christine O'Connor	7862US01	1100
106306	7590	09/30/2019	EXAMINER	
DIEDERIKS & WHITELAW, PLC 13885 Hedgewood Dr., Suite 317 Woodbridge, VA 22193-7932			TRAN, LIEN THUY	
			ART UNIT	PAPER NUMBER
			1793	
			NOTIFICATION DATE	DELIVERY MODE
			09/30/2019	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gmi.mail@dwpatentlaw.com  
mail@dwpatentlaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* CHRISTINE O’CONNOR and MICHELLE DACEY

---

Appeal 2018-008759  
Application 14/894,086  
Technology Center 1700

---

Before LINDA M. GAUDETTE, KAREN M. HASTINGS, and  
JAMES C. HOUSEL, *Administrative Patent Judges*.

HOUSEL, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner’s decision to reject claims 1–6 and 8–21 under 35 U.S.C. § 103 as unpatentable over Harte et al. (US 2010/0291265 A1, pub. Nov. 18, 2010 (“Harte”)) in view of Haasl et al. (US 4,297,378, iss. Oct. 27, 1981 (“Haasl”)), Finkel et al. (US 5,466,476, iss. Nov. 14, 1995 (“Finkel”)), and Kristine (“Mix Your Own Gluten Free Flour—Learn How With This Easy

---

<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as General Mills, Inc. Appeal Br. 3.

(and awesome) Guide!”, available at <http://thankheavens.com.au/2013/01/31/mix-your-own-gluten-free-flour-easy-guide/> (Jan. 31, 2013) (“Kristine”). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.<sup>2</sup>

### STATEMENT OF THE CASE

The invention relates to formulations and methods of making shelf-stable, ready-to-bake gluten-free pie dough. Spec. ¶ 9.

Claim 1, reproduced below from the Claims Appendix to the Appeal Brief, is illustrative of the subject matter on appeal.

1. A gluten-free, ready-to-bake pie dough composition comprising:
  - a gluten-free flour mixture in an amount from 31% to 50% by weight of the composition, the gluten-free flour mixture including less than 15% rice flour by weight of the composition, sorghum flour, and 20% to 35% by weight of the composition of potato starch, corn starch, or combinations thereof;
  - at least one oil in an amount from 4.5% to 5.5% by weight of the composition;
  - shortening in an amount from 20% to 30% by weight of the composition;
  - fructose in an amount from 1% to 4.5% by weight of the composition;
  - water from 20% to 25% by weight of the composition;
  - and
  - sucrose in an amount of less than 5% by weight of the composition, wherein the composition has a water activity of

---

<sup>2</sup> Our Decision refers to the Specification (“Spec.”) filed Nov. 25, 2015, Appellant’s Appeal Brief (“Appeal Br.”) filed Apr. 26, 2018, the Examiner’s Answer (“Ans.”) dated July 13, 2018, and Appellant’s Reply Brief (“Reply Br.”) filed Aug. 30, 2018.

0.94 or less and a pH of 7 or less.

The remaining independent claim 13 recites a method of manufacturing a raw dough product comprising combining the ingredients and amounts of a composition of claim 1, and forming and packaging the raw dough product made therefrom.

### ANALYSIS

For purposes of this appeal, to the extent that the claims on appeal are separately argued, we will address them separately consistent with 37 C.F.R. § 41.37(c)(1)(iv).

#### *Claim 1*

The Examiner finds that Harte discloses a gluten-free pie dough composition comprising 1–50% flour, 1–50% fat component including shortening and vegetable oil, 1–25% starch component including corn starch, potato starch, 5–75% sweetener component such as sugar, and water in an amount of from 10–50%. Ans. 4. The Examiner also finds that Harte teaches that the flour component includes any known gluten-free flour, such as 5–6 wt.% rice flour and sorghum flour. *Id.* The Examiner acknowledges that Harte fails to teach the specifically recited amounts of shortening, oil, and fructose, and the water activity and pH as recited in claim 1. *Id.*

For these features, the Examiner finds Haasl discloses a shelf-stable pie dough having 24–35% shortening, 19–25% total water, and a water activity between 0.9 and 0.94, and a pH of 5–5.6. Ans. 4–5. The Examiner further finds that Finkel discloses that fructose can be added as a browning aid and that sugars such as sucrose and fructose can be added to adjust the

product's sweetness. *Id.* at 5. In addition, the Examiner finds Kristine discloses that many starches and flours can be used in varying amounts to form gluten-free flours, including potato starch, corn starch, rice flour, and sorghum flour. *Id.*

The Examiner concludes that it would have been obvious, given Harte's disclosure of broad ranges of the ingredients to be used, to formulate a composition with specific amounts of Harte's ingredients depending on the product to be made. Ans. 5. Because Harte teaches that the composition may be used to make pie dough, the Examiner also concludes that it would have been obvious to use the amounts of shortening and water, and to obtain the recited water activity and pH, that Haasl teaches for making Harte's shelf-stable pie dough, especially since Harte teaches adding salt and citric acid. *Id.* Moreover, the Examiner concludes that it would have been obvious to include sucrose and fructose in the recited amounts in order to adjust the dough to the desired sweetness and to provide a browning aid as taught by Finkel. *Id.* at 6. The Examiner further concludes that it would have been obvious to form a gluten-free flour for use in Harte's pie dough from any of the different materials disclosed in Kristine, especially because both Harte and Kristine teach rice flour, sorghum flour, corn starch, and potato starch may be used. *Id.* Finally, the Examiner cites *In re Levin*, 178 F.2d 945 (CCPA 1949) in support of the rejection. *Id.* at 7.

Appellant argues that the Examiner's reliance on *Levin* is in error because the Examiner applies an improper interpretation of this case which is contrary to the obviousness standard set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). Appeal Br. 6. In addition, Appellant contends that the Examiner improperly relies on dicta within *Levin* which has no legal

weight in light of *Graham v. Deere* and subsequent obviousness case law. *Id.* at 7. Appellant further contends that the Examiner's reliance on Levin represents a *per se* rule rationale that is improper. Reply Br. 2.

We do not find this argument persuasive of reversible error in the Examiner's rejection. Although *Levin* was decided prior to *Graham v. Deere*, we find no inconsistencies between the obviousness standard laid out in the *Deere* decision (and explained in *KSR v. Teleflex*) and the principles from Levin relied on here by the Examiner. Specifically, the portions of *Levin* that the Examiner relies on merely acknowledge that common, known food ingredients including sugar, flour, oil, salt, etc. have such well known properties, uses, and effects such that, for example, the inclusion of sugar for added sweetness generally would have been obvious absent the discovery that something unexpected results from its inclusion in a particular composition. Nonetheless, we find, as set forth below, that the Examiner's rejection does not rest upon the principles cited from *Levin* alone, but on the teachings and suggestions of the prior art considered as a whole by one of ordinary skill in the art.

Appellant next argues that, absent hindsight, there is no reason why the ordinary artisan would select the presently claimed gluten-free mixture including less than 15% rice flour, sorghum flour, and 20–35% corn and potato starch to form a ready-to-bake gluten-free pie crust based on the prior art. Appeal Br. 7. Appellant contends that the specifically recited flour mixture is critical to the gluten-free pie dough as evidenced by the Specification. *Id.* In particular, Appellant notes the Specification discloses that it was found that the flour mixture has a neutral flavor and tender texture when mixed with the remaining ingredients. Appeal Br. 7; Spec. ¶

16. Appellant also notes the disclosure that the flour mixture is a substitute for wheat or other gluten-containing flours typically used in pie dough. Appeal Br. 7; Spec. ¶ 17. Still further, Appellant notes the disclosure that sorghum flour provides additional structure and textural properties, and potato and/or corn starch provides texture similar to wheat without off flavors. Appeal Br. 7; Spec. ¶¶ 20–21. Based on these disclosures, Appellant urges that the recited flour mixture exhibits particularly advantageous attributes and is critical to the dough mixture. Appeal Br. 8.

This argument is not persuasive of reversible error. As the Examiner responds, Harte teaches a flour mixture including rice and sorghum flour, as well as at least one of corn and potato starch. Ans. 7–8; Harte ¶ 13. In addition, Harte teaches that the rice flour can be 5–6% and that the starch component is typically from 1–25%. Harte ¶¶ 14, 19. Because Harte teaches the specific components of the flour mixture and amounts in ranges overlapping with those recited in claim 1, the Examiner has established a *prima facie* case that the flour mixture would have been obvious without resort to improper hindsight. *See E.I. DuPont de Nemours & Co. v. Synvina C.V.*, 904 F.3d 996 (Fed. Cir. 2018) (“[A] *prima facie* case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art.” (quoting *In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003))).

As for Appellant’s contention that the specific flour mixture of claim 1 exhibits particularly advantageous attributes and is critical to the gluten-free pie dough, we note that the disclosures Appellant directs our attention to fail to establish such criticality or any unexpected results. Merely noting properties of a particular combination of known ingredients is insufficient in

this regard. Further, Harte's purpose for a gluten-free dough composition at least overlaps Appellant's desire to provide a gluten-free pie dough that has similar taste, texture, and rheology as gluten-containing pie dough. *See, e.g.*, Harte ¶¶ 13 ("may be used to replace wheat flour"), 15 ("may also be used to replace the functionality of gluten (from wheat)"). We thus find Appellant's assertion of criticality unpersuasive.

Appellant next argues that there is no apparent reason why one would look to Haasl to modify Harte, because the ingredients and amounts in a gluten-containing product would be inapplicable to a gluten-free product because of fundamental differences in wheat and other gluten-containing dough products versus gluten-free products. Appeal Br. 8. Appellant notes that Haasl discusses the importance of the protein, i.e., gluten, level in the dough to prevent excessive cracking. *Id.*

We do not find this argument persuasive because Appellant fails to provide support for the view that Haasl's teachings regarding the amounts of shortening, water, water activity, and pH are inapplicable to Harte's gluten-free dough composition merely because Haasl otherwise includes gluten-containing flour components. As the Examiner explains, Haasl teaches that water activity is controlled by salt which is added for flavor and to reduce the water activity, and that pH is controlled by the addition of citric acid to prevent molding. Ans. 4–5. The Examiner notes that Harte also includes salt and citric acid in the gluten-free composition. *Id.* at 5–6. Moreover, the Examiner finds that the ordinary artisan would look to Haasl for guidance in the amounts of water and shortening to use when modifying Harte to form a pie dough. *Id.* at 5. The ordinary artisan would not be dissuaded from following Haasl's teachings for the above ingredients merely because

Haasl's flour component is not gluten-free since Harte teaches ways to replace the functionality of gluten in the gluten-free dough.

Appellant next argues that there is no basis for the Examiner's reasoning with regard to the use of fructose as a browning aid in Harte's composition. Appeal Br. 9. Appellant contends that Harte fails to teach or suggest that a brown color is desired, and thus there would be no reason to look to Finkel to add fructose to Harte's composition. *Id.* Appellant also contends that there is no suggestion that the amount of fructose which would be used for browning is the same as the amount recited in claim 1, which is used to produce a soft texture and avoid dough cracking. *Id.*

The Examiner responds that Harte teaches the addition of a sweetener component, listing a variety of sweeteners without limitation, and that Finkel teaches that sucrose and fructose may be added to pie dough in amounts adjusted to the desired sweetness. Ans. 9–10. Therefore, even if Harte did not desire the use of a browning aid, Finkel reasonably suggests to the ordinary artisan the use of sucrose and fructose as the sweetener component in Harte's composition. That fructose may also serve as a browning aid does not detract from this suggestion, especially considering that browning is a well-known desired feature on many baked pastry products including pie. We, therefore, do not find Appellant's argument in this regard to be persuasive of reversible error.

With regard to Kristine, Appellant argues that this article fails to teach a flour mixture suitable for a pie crust or a mixture that includes the recited components of the claimed gluten-free mixture. Appeal Br. 10. Appellant contends that the Examiner fails to provide a reason why the ordinary artisan would select the specific ranges of flours recited in claim 1, and that "simply

stating that it would [have been] obvious to vary the combination of ingredients and amounts based on a taste, flavor and texture desired is insufficient to establish a prima facie case of obviousness.” *Id.*

This argument misapprehends the rejection in that the Examiner does not rely on Kristine for a teaching of a pie crust flour mixture or the flour mixture recited in claim 1. The Examiner relies on Harte’s teaching that a gluten-free flour mixture can include 5–6 % rice flour, sorghum flour, and 1–25% corn and/or potato starch. Instead, Kristine is merely relied on as a teaching reference of known properties of these ingredients that can be combined in varying amounts to form gluten-free flour mixtures.

Appellant raises substantially the same arguments for independent claims 1 and 13. Therefore, for the same reasons as given above with regard to claim 1, we do not find these arguments persuasive as to claim 13. In addition, Appellant does not separately argue dependent claims 2, 3, 10–12, and 14–16. Accordingly, we sustain the Examiner’s obviousness rejection of claims 1–3 and 10–16.

*Claims 4 and 17*

These claims recite that the composition or raw dough product comprises sucrose in an amount from 1–3 wt.%.

Appellant raises substantially the same argument for claims 4 and 17. Appellant argues that Harte, alone or in combination, fails to teach the amount of sucrose recited in these claims. Appeal Br. 10, 13. Appellant further argues that Finkel fails to teach reducing sugar to 1–3 wt.%. *Id.*

However, the Examiner responds that although Harte teaches 5–75 % sweetener, Harte further teaches that this amount may be varied by plus or minus 5%, 10%, or more. Ans. 11. Based on this teaching, the Examiner

finds that Harte's disclosure suggests amounts of sweetener as low as 0%. *Id.* As such, the Examiner concludes that, based on this finding, a prima facie case of obviousness exists over Harte based on overlapping ranges, especially given that Harte teaches that the amount of sweetener can be varied to arrive at the desired sweetness intensity. *Id.*

Appellant argues that the Examiner's reasoning violates *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995), and is contrary to *Genetics Institute, LLC v. Novartis Vaccines and Diagnostics, Inc.*, 655 F.3d 1291, (Fed. Cir. 2011). Reply Br. 4. We disagree. The Examiner is not applying a *per se* rule, but is instead applying a legal principle supported by legal precedent. *Peterson*, 315 F.3d at 1329. This principle holds that a broad range in the prior art typically, but not always, renders obvious a narrower claimed range where overlap exists between the broad and narrower ranges. Appellant fails to establish or explain why, in this case, obviousness does not lie.

Accordingly, we sustain the Examiner's obviousness rejection of claims 4 and 17.

*Claims 5 and 18*

These claims recite that the composition or raw dough product comprises 4–15 wt.% rice flour.

Appellant raises substantially the same argument for claims 5 and 18. Appellant argues that the Examiner fails to provide any reason why 4–15 wt.% rice flour is desirable. Appeal Br. 11, 13.

However, the Examiner reiterates the finding that Harte discloses that the composition may include 5–6 wt.% rice flour. Ans. 12. Appellant fails to identify error in, or otherwise address, this finding. Therefore, we sustain the Examiner's obviousness rejection of claims 5 and 18.

*Claim 6 and 19*

These claims recite that the composition or raw dough product comprises 4.5–8 wt.% sorghum flour.

Appellant raises substantially the same argument for claims 6 and 19. Appellant argues that Harte, alone or in combination, fails to teach the amount of sorghum recited in these claims. Appeal Br. 11, 13.

However, the Examiner reiterates the finding that Harte discloses that the composition includes 1–50 wt.% flour, which may include sorghum flour. Ans. 12. Absent unexpected results, the recited range of sorghum flour would have been prima facie obvious over the overlapping prior art range of flour, including sorghum flour, of Harte. *Peterson*, 315 F.3d at 1329. Therefore, we sustain the Examiner’s obviousness rejection of claims 6 and 19.

*Claim 8 and 20*

Claims 8 and 20 recite that the composition or raw dough product comprises 13–15 wt.% potato starch.

Claims 9 and 21 recite that the composition or raw dough product comprises 12–16 wt.% corn starch.

Appellant raises substantially the same argument for claims 8, 9, 20, and 21. Appellant argues that Harte fails to teach the amount of potato and corn starches recited in these claims. Appeal Br. 11–14. Appellant asserts that the Examiner relies on Haasl for a teaching of the recited amounts of these starches, but argues that there is no disclosure of the claimed composition or raw dough product. *Id.*

However, the Examiner reiterates the finding that Harte discloses that the composition or raw dough product includes 1–25 wt.% starch, which

may include potato and/or corn starch. Ans. 12. Absent unexpected results, the recited range of potato starch would have been prima facie obvious over the overlapping prior art range of starch, including potato starch, of Harte. *Peterson*, 315 F.3d at 1329. Therefore, we sustain the Examiner's obviousness rejection of claims 8, 9, 20, and 21.

### DECISION

Upon consideration of the record, and for the reasons given above and in the Examiner's Answer, the decision of the Examiner rejecting claims 1–6 and 8–21 is *affirmed*.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

### CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–6, 8–21	§ 103 over Harte, Haasl, Finkel, and Kristine	1–6, 8–21	

AFFIRMED